

Title (en)

Load sensor having load detection element and support element and method for manufacturing the same

Title (de)

Lastsensor mit Lasterfassungselement und Trageelement und Verfahren zu dessen Herstellung

Title (fr)

Capteur de charge disposant d'un élément de détection de charge et d'un élément de support et son procédé de fabrication

Publication

EP 2093550 A2 20090826 (EN)

Application

EP 09002205 A 20090217

Priority

JP 2008040475 A 20080221

Abstract (en)

A method for manufacturing a load sensor including a load detection element (10) and a support element (20, 22, 24, 30, 50, 60) is provided. The support element includes a base (20, 22, 24) and a spring (30, 50, 60). The spring includes a support portion (32, 52, 62), a connection portion (31, 51, 61) bonding to the base, and a connecting member (33, 53, 63) coupling the support portion and the connection portion. The support element transmits a detection load to the load detection element via the base and the spring. The method includes: sandwiching the load detection element between the base and the support portion; bonding the connection portion on the base so that the connecting member is deformed beyond the elastic deformation region to reach the plastic deformation region; pressing the support portion so that a contact surface of the support portion is plastically deformed; and returning deformation of the connecting member to be in the elastic deformation region.

IPC 8 full level

G01L 1/20 (2006.01)

CPC (source: EP US)

G01L 1/20 (2013.01 - EP US); **Y10T 29/49117** (2015.01 - EP US); **Y10T 29/49927** (2015.01 - EP US)

Citation (applicant)

- JP 2005172793 A 20050630 - TOYOTA CENTRAL RES & DEV
- US 7059203 B2 20060613 - ASAI MITSURU [JP], et al
- JP 2005249598 A 20050915 - DENSO CORP
- US 6997060 B2 20060214 - MORIKAWA KENJI [JP]
- JP H1137860 A 19990212 - NIPPON SOKEN, et al
- US 2004000195 A1 20040101 - YANAI KENICHI [JP], et al

Cited by

EP3388202A1; US11154975B2

Designated contracting state (EPC)

DE FR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2093550 A2 20090826; **EP 2093550 A3 20100714**; **EP 2093550 B1 20121128**; JP 2009198324 A 20090903; JP 4605232 B2 20110105; US 2009211365 A1 20090827; US 8141431 B2 20120327

DOCDB simple family (application)

EP 09002205 A 20090217; JP 2008040475 A 20080221; US 37878609 A 20090219